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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,068	09/12/2003	Lance E. Stover	S01.12-0990	1942

7590 01/03/2005
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EXAMINER

FIGUEROA, NATALIA

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,068

Applicant(s)

STOVER ET AL.

Examiner

Natalia Figueroa

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-13 is/are allowed.
- 6) ☒ Claim(s) 1,8,14,18 and 19 is/are rejected.
- 7) ☒ Claim(s) 2-7,9,10,15-17 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/12/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on September 12, 2003 (09/12/2003) is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because:

- For figure 4, reference character "128-1" is discussed but is not present in the figure.
- For figures 4 and 5, reference character "128-2" is discussed twice.
- In page 8 of the specification, 3rd paragraph, 3rd line, examiner believes that where it reads, "fig. 6", it should in fact read - fig. 7 -.

3. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2651

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 8 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Hinobayashi (JP 02-206010).

RE claim 1, Hinobayashi discloses an operating method for a data storage device comprising steps of energizing a heating element proximate to a transducer portion of a head during an intermittent period prior to a read or write operation by supplying a signal or current (abstract) having a relatively low amplitude to provide a relatively low grade thermal response or energization relative to energization of an inductive or write transducer element of the head; and de-energizing the heating element for the read or write operation (constitution).

RE claim 8, Hinobayashi discloses a n operating method for a data storage device (abstract) comprising steps of having a write signal_{write} or a read signal_{read} during a first period and a write signal_{write} or a read signal_{read} during a second period and providing a signal_{heat} or current_{heat} to energize a heating element proximate to a transducer portion of a head during an interim period spanning between the first and second periods; and de-energizing the heating element during the first and second periods (constitution).

RE claim 14, apparatus claim 14 is drawn to the apparatus corresponding to the method of using same as claimed in claim 1. Therefore apparatus claim 14 corresponds to method claim 1, and is rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2651

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinobayashi in view of Gillis et al (USPN 6,822,819), hereinafter Gillis.

RE claim 18, Hinobayashi is relied upon for the same reasons of rejection as stated above. Hinobayashi fails to explicitly teach that the heater is separate from a transducer element or transducer elements of the head.

However, Gillis disclose such on (col. 6, lines 7-12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method as disclosed by Hinobayashi with the above teachings from Gillis to include the heater at an accessible range to the transducer, hence providing the energization needed for the inductive element therefore avoiding or preventing pole tip protrusions.

RE claim 19, Gillis further discloses that the heater includes a resistive heating element (col. 5, lines 31-32).

Allowable Subject Matter

8. Claims 2-7, 9-10, 15-17 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 11-13 are allowed.

10. The following is an examiner's statement of reasons for allowance:

RE claim 11, the prior art of record, and in particular Hinobayashi (JP 02-206010), fails to teach or suggest an operating method for a data storage device comprising steps of energizing a heating element proximate to a transducer portion of a head during an intermittent period prior to a read or write operation by supplying a signal or current to provide a relatively low grade thermal response to provide intermittent heating; and energizing the heating element by supplying a signal or current to provide a higher thermal response prior to a write operation to preheat the head.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents are cited to further show the state of the art with respect to heating elements.

a) Tokuyama (JP 02-210679): Discloses a floating slider by means of a current controller.

Art Unit: 2651

b) Meyer et al (USPN 5,991,113): Discloses transducer positioning by means of temperature responsiveness.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Figueroa whose telephone number is (703) 305-1260.

The examiner can normally be reached on Monday - Thursday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N. Tran can be reached on (703) 305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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SUPERVISORY PATENT EXAMINER